

FOUR-YEAR EXPERIENCE WITH BELIMUMAB, A BLYS-SPECIFIC INHIBITOR, IN PATIENTS WITH SYSTEMIC LUPUS ERYTHEMATOSUS (SLE): LBSLO2/99 STUDY

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Provide 4-yr safety and efficacy data from SLE patients (pt) treated with belimumab.

Methods: 449 SLE pts with SELENA SLEDAI (SS) \geq 4 enrolled in a phase 2, 52-wk, double-blind, placebo (pl)-controlled trial of belimumab (1, 4, or 10 mg/kg, q28d) plus standard of care (SOC) SLE therapy. At wk 56, pl pts were switched to belimumab 10 mg/kg; belimumab pts could remain on 1 or 4 mg/kg or switch to 10 mg/kg (investigator's discretion). At wk 80, remaining 296 pts continued belimumab 10 mg/kg. The 4-yr dataset was divided into eight 6-mo intervals for reporting adverse event (AE) and flare rates. Interval 1 includes the initial belimumab treatment, which began at wk 56 for pl pts. Analyses of disease activity included the SS SLE Flare Index (SFI) and a post-hoc SLE Responder Index (SRI): improvement in SS (≥4 pt decrease), no new BILAG A or 2 new B flares, and no >0.3-point worsening in Physician's Global Assessment (PGA) vs baseline. Post-hoc analyses identified a serologically active (ANA titer \geq 1:80 and/or anti-dsDNA \geq 30 IU/mL) pt subgroup (321) for whom belimumab demonstrated increased response.

Results: By 4 yrs, overall belimumab exposure was 1,192 pt-yrs. The incidence rates (per 100 pt-yrs) of AEs remained the same or decreased over 4 yrs (Table 1). In serologically active pts, SRI rate was 46% at wk 52 (vs pl 29%; $p < 0.05$), which increased to 55% by wk 76 and was maintained through wk 208 (original belimumab pts); the frequency of new BILAG A or 2 B flares decreased from 30% at 6 mo to 23% at 1 yr (vs pl 33% and 25%, respectively) and declined to 5% at 4 yrs; the frequency of flares by SFI decreased from 72% at 6 mo to 62% at 1 yr (vs pl 76% and 73%, respectively) and declined to 16% at 4 yrs. Flare data included pl-to-belimumab pts after yr 1.

Conclusion: Belimumab plus SOC therapy was generally well tolerated over 4 yrs. Serologically active pts treated with belimumab showed sustained improvement in disease activity and a decline in BILAG and SFI flares over 4 yrs. (NCT00071487/NCT00583362)

Table 1:

Table 1: AE Incidence (rate per 100 pt-yrs)								
	All belimumab-treated pts							
Interval (yrs)	1 (0-0.5 yr)	2 (0.5-1 yr)	3 (1-1.5 yr)	4 (1.5-2 yr)	5 (2-2.5 yr)	6 (2.5-3 yr)	7 (3-3.5 yr)	8 (3.5-4 yr)
No. Pts [pt-yrs]	424 [206]	398 [183]	353 [166]	314 [147]	284 [136]	261 [128]	252 [122]	237 [103]
Overall AEs	400 (194)	337 (184)	304 (184)	271 (184)	244 (179)	226 (177)	203 (166)	179 (173)
Serious AEs	43 (20.8)	33 (18.0)	28 (16.9)	25 (17.0)	24 (17.6)	26 (20.4)	13 (10.6)	17 (16.5)
Overall Infections	246 (119)	197 (108)	170 (103)	165 (112)	145 (107)	131 (103)	106 (87)	105 (102)
Serious Infections	14 (6.8)	10 (5.5)	6 (3.6)	8 (5.4)	4 (2.9)	5 (3.9)	2 (1.6)	5 (4.8)
Malignant Neoplasms	0 (0)	1 (0.5)	3 (1.8)	2 (1.4)	0 (0)	1 (0.8)	1 (0.9)	2 (2.1)